PROJECT facts
U.S. Department of Energy
National Energy Research Laboratory

**Materials and Advanced Metallurgical Research**
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# Advanced Foil Lamination

## Project Lead
Albany Research Center
Albany, OR

## Description
The objective of this research program is to develop micro-reactors for use in energy related applications. An example, of a potential energy related application for micro-reactor technology, is as reformers and/or hydrogen filters (separators) for fuel cells. Another example of a potential application is as recuperators, for advanced turbine designs. The specific research focuses on fabrication of micro-reactors via a process called lamination; the bonding of sequentially layered, precision machined foils or sheets. The aim of the research is to understand the influence of the design (the internal features, such as channels separated by fins) of the reactor on the bonding process. The program also addresses the influence of functional members, (such as a catalytic surface coatings on foils embedded within the reactor) on the manufacturing process.

## Product Support Areas

| Gasification Technologies | Combustion Technologies | Sequestration | Environmental & Water Resources | Advanced Turbine & Engines | Fuel Cells |
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Project:
Code: AMP-002

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